

CLAIMS

What is claimed is:

1. A method for applying a fungicide to a tree, the method comprising:
 - 5 applying a fungicidal composition to the bark periderm of woody plants without mechanically penetrating or piercing the bark of the plant, the fungicidal composition including (a) a systemic fungicide; (b) an organosiloxane surfactant; and (c) water.
 - 10 2. The method of claim 1, where said step of applying includes spraying the fungicidal composition on the bark periderm.
 - 15 3. The method of claim 1, where said step of applying includes an application rate corresponding to applying about 25 to about 125 grams of systemic fungicide to six feet of a tree, measured from the base, where the tree has a diameter breast height of about six inches.
 - 20 4. The method of claim 1, where said step of applying includes an application rate corresponding to applying about 35 to about 105 grams of systemic fungicide to six feet of a tree, measured from the base, where the tree has a diameter breast height of about six inches.
 - 25 5. The method of claim 1, where said step of applying includes an application rate corresponding to applying about 45 to about 95 grams of systemic fungicide to six feet of a tree, measured from the base, where the tree has a diameter breast height of about six inches.
 - 30 6. The method of claim 1, where said step of applying includes an application rate corresponding to applying about 50 to about 75 grams of systemic fungicide to six feet of a tree, measured from the base, where the tree has a diameter breast height of about six inches.
 7. The method of claim 1, where the fungicidal composition includes a solvent.

8. The method of claim 7, where the solvent is selected from the group consisting of alcohols, glycols, and glycol esters.
9. The method of claim 7, where the fungicidal composition includes a surface active agent.
10. The method of claim 9, where the surface active agent is selected from the group consisting alcohol alkoxylates based on branched and linear alcohols containing ethylene oxide or propylene oxide, alcohol alkoxylate sulfates, nonylphenol alkoxylate containing ethylene oxide, nonylphenol alkoxylate containing propylene oxide, octylphenols alkoxylate containing ethylene oxide, octylphenols alkoxylate containing propylene oxide, fatty amine alkoxylates, butanediols, butyl cellulose ether, butyl carbitol, propylene glycol, ethylene glycol, mipropylene glycol, diethylene glycol, phosphate esters of alcohol alkoxylates, phosphate esters of alkylphenol alkoxylates, sorbitan esters, alkoxylated sorbitan esters and alkylpolyglucosides.
11. The method of claim 1, where the systemic fungicide is selected from the group consisting of aliphatic nitrogen fungicides, amide fungicides, acylamino acid fungicides, furamide fungicides, phenylsulfamide fungicides, valinamide fungicides, anilide fungicides, benzanimide fungicides, furanilide fungicides, sulfonanilide fungicides, antibiotic fungicides, strobilurin fungicides, aromatic fungicides, benzimidazole fungicides, benzimidazole precursor fungicides, benzothiazole fungicides, bridged diphenyl fungicides, carbamate fungicides, benzimidazolylcarbamate fungicides, carbanilate fungicides, conazole fungicides such as imidazole and triazole conazole fungicides, copper fungicides, dicarboximide fungicides, dinitrophenol fungicides, dithiocarbamate fungicides, cyclic dithiocarbamate fungicides, polymeric dithiocarbamate fungicides, inorganic fungicides, imidazole fungicides, inorganic mercury fungicides, organomercury fungicides, morpholine fungicides, organophosphorus fungicides, organotin fungicides, oxathiin fungicides, oxazole fungicides, polysulfide fungicides, pyridine fungicides, pyrimidine fungicides, pyrrole fungicides, quinoline fungicides, quinone

fungicides, quinoxaline fungicides, thiazole fungicides, thiocarbamate fungicides, thiophene fungicides, triazine fungicides, triazole fungicides, and urea fungicides.

12. The method of claim 1, where the systemic fungicide includes a phosphite
5 compound.

13. The method of claim 12, where the phosphite compound is selected from the group consisting of salts of phosphorous acid, salts of polyphosphorous acid, salts of hypophosphorous acid, and salts of polyhypophosphorous acid.

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14. The method of claim 13, where the salts of phosphorous acid include monopotassium phosphite, dipotassium phosphite, tripotassium phosphite, mixtures of mono and di potassium phosphite, and mixtures of mono, di, and tri potassium phosphite.

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15. The method of claim 12, where the phosphite includes monoester phosphorous acids.

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16. The method of claim 1, where the fungicidal composition includes from about 0.0001 to about 3.0 parts by weight of the organosiloxane surfactant per part of systemic fungicide.

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17. The method of claim 1, where the fungicidal composition includes from about 0.003 to about 0.05 parts by weight of the organosiloxane surfactant per part of systemic fungicide.

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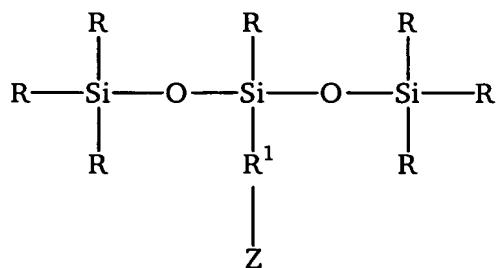
18. The method of claim 7, where the fungicidal composition includes from about 0.0001 to about 1.0 parts by weight solvent per part of systemic fungicide.

19. The method of claim 9, where the fungicidal composition includes from about 0.0001 to about 2.0 parts by weight surface active agent per part of systemic fungicide.

20. The method of claim 12, where the fungicidal composition includes from about 5% to about 50% by weight phosphite.

5 21. The method of claim 20, where the fungicidal composition includes from about 10% to about 30% by weight phosphite.

22. The method of claim 1, where the organosiloxane surfactant includes a trisiloxane defined by the formula



10 where R is a short chain alkyl group, R¹ is an alkylene group, and Z is a polyoxyalkylene group.

23. The method of claim 22, where the organosiloxane includes a polyoxyethylene heptamethyl trisiloxane.

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24. The method of claim 1, where said step of applying a fungicidal composition to the bark periderm of woody plants includes applying the fungicidal composition to the bark of the woody plant in a location from the root flare up to the first branch of the plant.

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25. The method of claim 24, where said step of applying a fungicidal composition to the bark periderm of woody plants includes applying the fungicidal composition to the bark of the woody plant in a location from the root flare up to the second branch of the plant.

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26. The method of claim 24, where said step of applying includes an application rate corresponding to applying about 25 to about 125 grams of systemic fungicide

to six feet of a tree, measured from the base, where the tree has a diameter breast height of about six inches.

27. The method of claim 24, where said step of applying includes an application 5 rate in an amount that the fungicidal composition will runoff the bark.

28. The method of claim 24, where the bark periderm of the woody plant to which the fungicidal composition is applied consists essentially of that portion between the root flare and the first branch.

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29. The method of claim 29, where the bark periderm of the woody plant to which the fungicidal composition is applied consists that portion between the root flare and the first branch.